

## UMOBILE QUARTERLY REPORT

**Action full title:** *Universal, mobile-centric and opportunistic communications architecture*

**Action acronym:** UMOBILE

**Grant Agreement number:** 645124

**Period covered:** M13 – M15 (February 2016-April 2016)

### A) UMOBILE achievements of the last reporting period:

#### WP1:

- 4<sup>th</sup> internal management report preparation and submission
- 3<sup>rd</sup> physical meeting preparation and conduction (Xanthi 12/04/16-13/4/16) – agenda and minutes are available
- 25/2/16 Technical teleconference & Project Coordination Committee meeting - agenda and minutes preparation
- 31/3/16 Technical teleconference & Project Coordination Committee meeting - agenda and minutes preparation
- Guidelines to the consortium for review, equipment purchase, person month deviations etc
- Update to the consortium about project amendment (articles 20.6, 21.2, 34.3, 38.1.2)
- Project amendment signature
- UMOBILE management structure update
- Mailing lists maintenance.

#### WP2:

- Submission of D2.2 on M14
- Identification of system requirements for the UMOBILE platform
- Work on the system deployability of the UMOBILE platform

#### WP3:

- Work on the integration of DTN characteristics in the UMOBILE platform
- Development of necessary modules for the NDN-DTN integration
- Work on service migration
- Work on naming
- Work on the integration of opportunistic, social-aware, communications in the UMOBILE platform
- Early specification of the sociability software module
- Work on in-network content discovery
- Initial work on smart routing
- Design of UMOBILE testbed

#### WP4:

- Work on QoS mechanisms to be integrated in the UMOBILE platform

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- Work on service placement algorithms
- Work on data collection and inference of affinity networks
- Development of the wireless tracking application PerSense Mobile Light

WP5: - (not started yet)

WP6:

- Participation in IETF meeting
- Participation in ICTP workshop
- Participation in the 23<sup>rd</sup> ICT conference
- Submission and publication of papers
- Release of open-source software
- Participation in the EU ITN CleanSky project workshop
- Updates on the Facebook profile and on the project website

## **B) UMOBILE actions planned for the next 3 months:**

WP1:

- Organisation of regular teleconferences on May, June and July.
- Arrangement of the 4<sup>th</sup> physical meeting
- Consortium coordination
- Maintenance of the project's mailing list
- Periodic report preparation

WP2:

- Work on D2.3
- Collection of traces in different locations worldwide, with the purpose of characterizing affinity networks and human mobility (based on Wi-Fi direct, with tool PerSense Mobile Light)
- First analysis of the validation scenarios to match the system and network requirement specifications, as they emerged from the WP

WP3:

- Development of the service migration module
- Setup of the UMOBILE testbed
- Analysis of work on Task3.1, related to the usage of the DTN and ICN architectures on the UMOBILE abstraction layer
- Work on Task3.3 related to the specification of the first version of the UMOBILE smart routing proposal
- Migration of the Oi! app and SOCIO framework to the NDN platform
- Development of the Now@ application based on a new version of the SOCIO framework, incorporating the SCORP forwarding protocol, able to disseminate data in an opportunistic network based on users' social behaviour and data interest

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- Work on affinity networks tracking
- Implementation of the keyword-based mobile application sharing solution (KEBAB-COM/NET)
- Work on smart routing.

#### WP4:

- Work on QoS and flow control
- Work on service placement algorithms
- Complete evaluation of INRPP, based on the detailed implementation and collection of results for the related deliverables
- Initial results on the NFV Service Chaining framework, DRENCH
- Work on Task 4.3, focused on name-based replication priorities
- Validation of some aspects of context derived from the PerSense tool; adjust it as required by UMOBILE
- Analysis on prioritization rules to consider in naming

#### WP5:

- Initial preparation of tasks

#### WP6:

- Project results dissemination. Several talks are already planned for the coming period including a presentation at the Berlin IETF in July 2016
- Work on D6.4
- Potential submission of one scientific paper about the new concept of smart routing
- Dissemination of UMOBILE on COPELABS Scientific Advisory Board meeting (May 5<sup>th</sup> and 6<sup>th</sup> in Lisbon)
- Steering of the common vision of WP4, by assisting convergence between the three different tasks towards the proposed goals
- Validating some aspects of context derived from the PerSense tool; adjust it as required by UMOBILE.

#### **C) Problem/risk arose during this period, or any risk foreseen on the future and decisions taken to handle them:**

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#### D) Resources used during the period in a project level:

(Double-click on the following table to edit cells in Excel)

WP	No of pms	Personnel Cost	Travel	Equipment	Other	Subcontracting	Subtotal	Indirect costs	Total costs
1	1,86	8169,39	8739,19	0	0	0			
2	4,3	20277,16	0	0	0	0			
3	20,59	73939,53	4587,67	1848	1166,5	0			
4	7,1	19766,54	0	0	0	0			
5	0	0	0	0	0	0			
6	3,82	17517,47	3455,87	0	80	0			
	<b>37,67</b>	<b>139670,09</b>	<b>16782,73</b>	<b>1848</b>	<b>1246,5</b>	<b>0</b>	<b>159547,29</b>	<b>39886,82</b>	<b>199434,1</b>

#### E) Short description for other direct costs:

Travel costs for the 3<sup>rd</sup> consortium physical meeting

Project leaflets

DTN nodes purchase

Travel costs for ICTP Workshop on New Frontiers in Internet of Things, IEEE Infocom 2016 conference, IETF Meeting

#### F) Deviation from Annex 2 and/or paragraph 2.3.5 including subcontracting:

Minor deviations in project months (1-2 personmonths).

#### G) Evaluation of the implementation of the project workplan: Gantt chart control, milestones and indicators:

The Project is implemented according to the plan. Specifically:

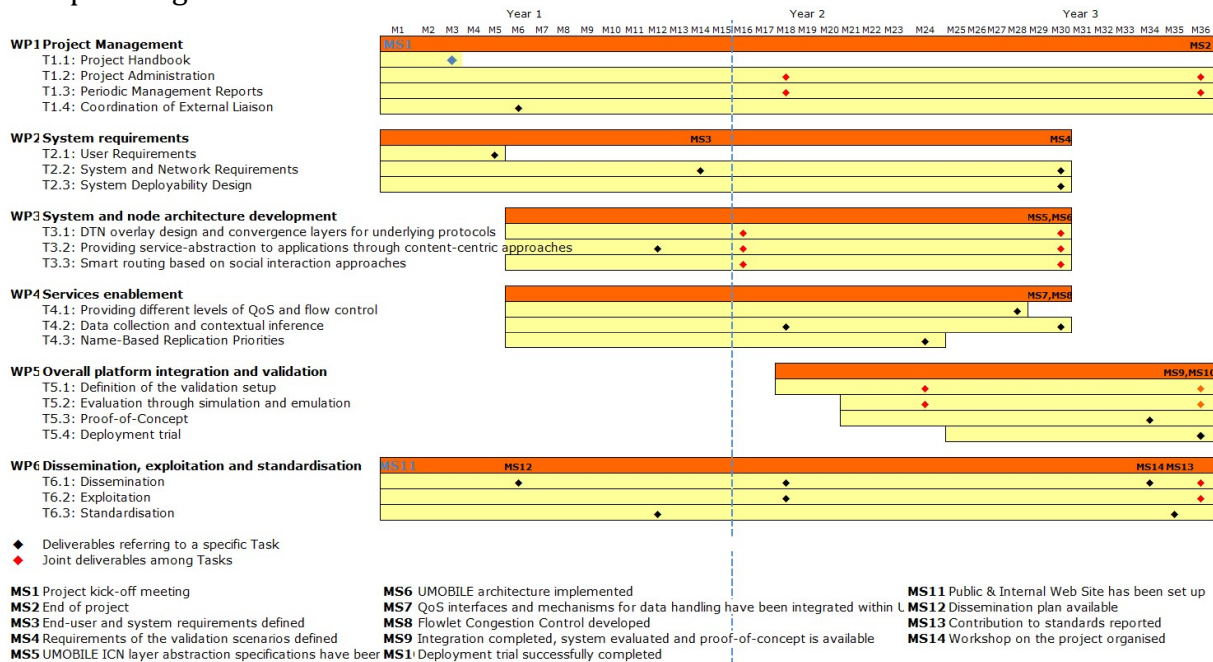
**Period Milestones:** MS1, MS3, MS11 and MS12 are accomplished according to the plan. The next milestones are scheduled for Month 30.

**Period Deliverables:** All deliverables are submitted according to the grant agreement timetable. D4.1 will be submitted on M18 (UMOBILE Coordinator asked permission on the behalf of the consortium to submit "D4.1 Flowlet Congestion -Initial Report" on month 18, as described in page 22 of the grant agreement instead of Month 12 included in the deliverables tables. The change has been accepted).

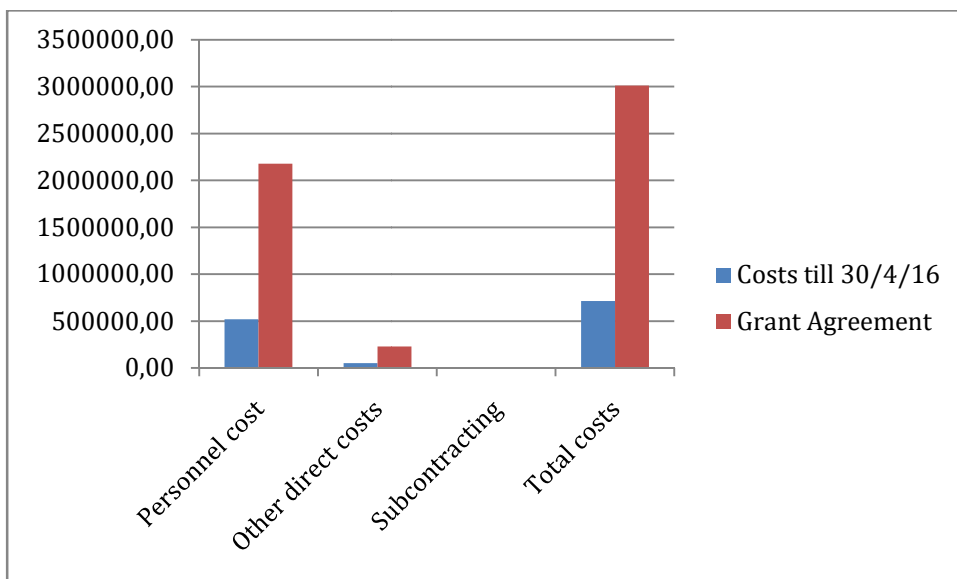
The table below summarizes the UMOBILE activities for the period February 2016-April 2016:

Project Month	Meeting	Deliverable	Milestone	Report	Additional events
February 2016	teleconference: 25/2/16	-	-	3monthly report for: M10 to M12	IEEE Infocom 2016 ICTP workshop IETF meeting
March 2016	teleconference: 31/3/16	D2.2 System and Network requirement specifications	MS3 End-user and system requirements defined	-	
April 2016	3rd physical meeting: 12/4/16-13/4/16	-	-	-	

An updated gantt chart follows:

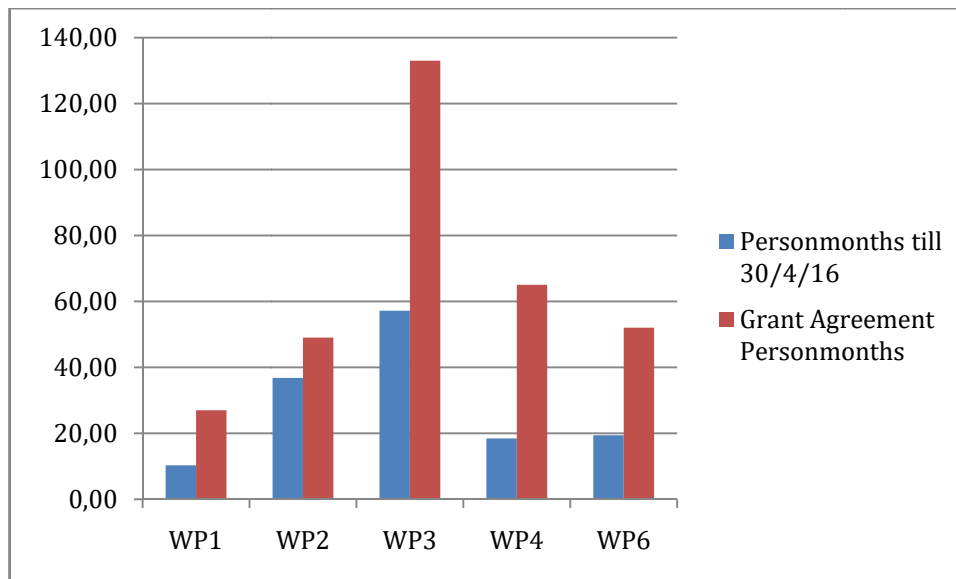


23.66% of total budget has been consumed for the activities described above (23.75% of the personnel costs, 22.87% of the other direct costs, 23.66% of the indirect costs), as presented in the following graph:



30.06% of the personmonths have been consumed for the activities described above:

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**This report was written by DUTH on the behalf of the UMOBILE consortium**